INTERNATIONAL JOURNAL OF POPULATION GEOGRAPHY, Vol. 1, 51–67 (1995)

Immigration Impacts on Internal Migration of the Poor: 1990 Census Evidence for US States

William H. Frey*

ABSTRACT

This article presents newly-available migration data from the 1990 US census to assess immigration and internal migration components as they affect state poverty populations. New immigrant waves are heavily focused on only a few 'port-of-entry' states. It is suggested that these immigrants have begun to impact upon internal migration into and out of these 'high immigration states', and have also altered the national system of internal migration patterns. This article addresses three questions: How do the magnitudes of poverty population out-migration from high immigration states compare with those of other states? Is this out-migration selective on particular social and demographic groups? Is immigration a significant determinant of internal migration of the poor population?

The results of this analysis are consistent with the view that recent, focused immigration is associated with out-migration among a state's poor longer-term residents. At the local level, there is a demographic displacement of low income residents by immigrants which involves more than just numbers of people. Rather, it involves a turnover of race, ethnic and skill-level characteristics in the state's poor population that can impact upon race relations, public service requirements and labor force quality.

Key words: immigration; internal migration; poverty; United States

*Population Studies Center, The University of Michigan, 1225 South University Avenue, Ann Arbor, MI 48104-2590, USA.

CCC 1077-3495/95/010051-17

INTRODUCTION

Recent studies have suggested that immigration to the US (Frey, 1994; 1995a; 1995b) and other developed countries (Champion, 1994) is affecting internal migration patterns in unprecedented ways. New immigrant waves are as large as those seen at the turn of this century and come from more diverse origins (Fix and Passel, 1994; Martin and Midgley, 1994), yet they are just as heavily focused on only a few 'port-of-entry' states. This raises questions as to how they relate to *internal* migration into and out of these 'high immigration states' as well as to their effects on the national system of internal migration.

Because recent immigration is heavily weighted towards developing-country origins in Latin America and Asia, and is disproportionately represented by less well-off and relatively unskilled populations, there is the possibility that immigrants will compete with native workers for low-skilled jobs and will serve to bid down their wages (Briggs, 1992; Borjas and Freeman, 1992; Borjas, 1994). Moreover, the arrival, in large numbers, of immigrant ethnic minorities changes the cultural milieu and perceptions of social costs for whites and more established, assimilated minorities that can lead to their out-migration.

Hence, immigrant-induced out-migration may not conform to the traditional 'circulation of elites' model, which characterizes more conventional long-distance migration patterns. According to this model, the probability of migration is highest among segments of the population with the most valued labor force characteristics: high education levels, professional occupations, and incomes that are at least within the middle-class range (Lansing and Meuller, 1964; Long, 1988).

This can be explained by the fact that employment opportunities for these population groups emerge in a nation-wide labor market rather than locally. Following economically 'rational' behavior, migrants are most apt to relocate toward areas with greatest employment gains. As a consequence, this 'circulation of elites' model would predict for economically growing states a disproportionately high in-migration rate for these more well-off segments of the population. Likewise, out-migration rates for these groups would be most accentuated in economically declining states.

However, in contrast to this conventional migration-selection model, migration rates from states with large numbers of immigrants appear to be 'downwardly selective'. That is, in these states, out-migration rates appear to be highest for population segments with less than college educations and with lower incomes. These patterns were already evident during the late 1970s from analyses of the 1980 census (Filer, 1992; Walker *et al.*, 1992; White and Imai, 1993), and their scope appears to have increased during the 1980s (Frey, 1994; Frey, 1995b). This unique pattern of internal migration, specific to states with large immigration flows, suggests that the latter flows are inducing a particular mobility response among groups that are not especially prone to long-distance migration. They also suggest that a 'demographic displacement' by immigrants of longer-term and native born residents may be occurring within the poor segments of these states' populations.[1]

This article presents new empirical findings on the relationship between immigration and internal migration of the US poverty population.[2] It addresses the questions: Is there a unique demographic displacement by immigrants of internal migrants in the 'High Immigration States'? And does the focused nature of immigration to these states affect the overall pattern of interstate poverty migration? From a state's perspective, the outflow of non-immigrant poor residents may partially offset the welfare and social service costs of poor immigrant inflows. However, the relationship might not be one-to-one in the sense that poverty out-migrants may be from more assimilated, higher skilled segments of these states' poor populations. Moreover, because the race and ethnic composition of immigrants is completely dominated by Latinos and Asians, an immigrant-for-resident demographic displacement that is accentuated within a state's poverty population can significantly alter the race-class structure of a state's population.

From the perspective of nationwide interstate migration flows, an accelerated internal out-migration of the poverty population from high immigration states should serve to increase the magnitudes of flows of poverty migrants to their often distinctive destinations. In contrast to the more well-off and better educated segments of the population, poor migrants are much more reliant on friends and family for social and economic support. Therefore, their destinations more often involve returning to familiar areas or regions of previous residence (Lansing and Mueller, 1964; Long, 1988; Johnson and Roseman, 1990). These migrants may also locate in states adjacent to the high immigration states, or in states that might provide especially good welfare benefits or social services to their poverty populations (so-called 'welfare magnet' states).[3] Thus, the increased internal migration of the poor population, directed out of high immigration states, is likely to increase the ranks of this population in a different set of states than those that are attracting more conventional interstate migrants.

POLICY AND THEORETICAL CONTEXTS

The linkages between immigration and internal migration are relevant to current debates about US immigration policy. A fundamental change in the immigration law, enacted in 1965, with revisions in 1986 and 1990, has increased the numbers and changed the demographic composition of US immigrants, especially since the 1980s (Martin and Midgley, 1994). Larger numbers of relatively less-skilled immigrants of developing-country origin, coupled with a large illegal immigrant flow, have prompted both official inquiries (Martin, 1993) and extensive public debate over the economic and social consequences of current immigration policy (Briggs, 1992; Fix and Passel, 1994; Miller, 1994; Borjas, 1994, 1995; Brimelow, 1995).

Some observers hold the view that this immigration represents a net gain to the country's economy because of immigrants' strong drive, entrepreneurship and propensity to save

(Simon, 1989). This view has been challenged by observations that the labor force quality of immigrants has deteriorated because of changes in the skill levels and national origins of immigrants admitted since the altered legislation in the late 1960s (Borjas, 1994, 1995). One of the alleged costs involves immigrants taking jobs away from those long-term US residents who are the most vulnerable in a changing economy – persons with modest incomes and without college educations. While the research to date is mixed in identifying the magnitude of this impact (Martin and Midgley, 1994), most studies of the topic do not take into account the possibility that affected long-term residents might simply migrate away from the labor markets that are receiving large numbers of immigrants. Hence, the economic costs of immigration may not only be evident in the higher unemployment or lower wages of an area's less well-off residents, but also in their accentuated out-migration (Borjas, 1995).

Labor market competition may not be the only reason why lower-income residents show a propensity to move away from high immigration areas. As I have argued elsewhere (Frey, 1994), this selective out-migration might represent a response to perceived higher social costs or disruption associated with rapid demographic change and the increased racial and ethnic diversity of these areas. During most of the early post-war years, the term 'white flight' was used to characterize the pervasive city-to-suburb movement of middle class whites. While this movement was motivated by the desire to achieve a better quality of life, research has also shown it to be responsive to the social costs and changing racial compositions of central cities (Frey, 1979). The argument can be made that, with the increasing ease of mobility, a similar 'flight' response can now take on a broader geographic scope and may be reflected in interstate migration of whites *and* blacks, in response to the immigration of new (Latino and Asian) minority groups. Although the evidence is mixed on the question of how great a tax burden immigrants impose on resident populations because of the additional social services they require (Fix and Passel, 1994; Martin and Midgley, 1994), there is a clear *perception* that this burden is substantial.[4] Because the poorer segments of the white and black populations will be most severely impacted by these costs, their out-migration response should be more pronounced than that of more affluent residents.

The relationship between immigration and internal migration is also addressed in recently proposed theories involving changes in the economic structure of urban areas within developed countries. Sassen (1991) argues that a social polarization is at work within 'global cities' and has evolved with the growth of advanced financial and business services which play a key integrating role in the new global economy. At the same time, traditional production-oriented manufacturing has declined dramatically in these areas. Because the new service-sector jobs have become much more polarized in their wage structures, and because the decline in the manufacturing sector has been accompanied by a decline in manufacturing wages, the occupation and income structures in these areas have become more two-tier. Further, the occupations represented in both the high- and low-wage sectors can complement each other (e.g., greater numbers of corporate executives create a demand for larger numbers of low-wage industrial and personal service workers).

Following this reasoning, it is argued that the emergence of global cities creates a demand for low-wage foreign immigrants without necessarily taking jobs away from longer-term residents. Any observed out-migration of native workers may simply represent the demise of somewhat better-paying manufacturing jobs. Therefore, a negative relationship between immigration and internal migration may simply reflect structural forces at work in these global cities. This kind of argument rests heavily on the assumption that immigration responds fairly freely to the changes in the demand for low-wage labor. While this is most certainly the case with much illegal immigration to the US, legal immigration is constrained, to a large degree, by the presence and location of already resident family members (Martin and Midgley, 1994). Hence, it may not be possible to generalize this scenario beyond those global cities which also serve as traditional ports of entry (Hamnett 1994:408). Even among these, the greatest decline in manufacturing jobs – which the theory purports to explain the out-migration of low-wage native workers – occurred during the 1970s and early 1980s (Frey, 1990),

rather than the 1985–90 period which is examined here.

QUESTIONS ADDRESSED

The specific questions to be addressed with the 1990 census migration data are:

1. How do the magnitudes of poverty population out-migration from high immigration states compare with those for states with relatively small numbers of immigrants?
2. Is the out-migration of the poverty population from high immigration states more pronounced than that of the non-poverty population?
3. Do the demographic attributes associated with the net out-migration of the poverty population in high immigration states differ sharply from the attributes of poverty immigrants from abroad?
4. Is immigration related to the internal migration of the poverty population, across states, when other social and economic migration determinants are taken into account?

An examination of these questions will permit an assessment of whether a 'demographic displacement' of immigration for internal migrants is indeed occurring for the reasons discussed above. The analysis employs census migration data based on tabulations of responses to the 'residence five years ago' question which was asked of approximately 16.7 per cent of 1990 census respondents. The analysis that follows was drawn from a special tabulation from this sample, weighted to national totals. The tabulation was compiled for all individuals aged five and above in 1990 (who were alive in 1985), by poverty status, by race and ethnicity, and by education attainment among persons aged 25 and over. Because of the way the data were compiled, statistics for whites (non-Latino whites) had to be estimated as discussed in the footnote to Table 3.

In these analyses, the assessment of internal migration will use a measure of net internal migration specific to each state over the 1985–90 period. This is determined by summing all 1990 residents of the state who resided in another state in 1985 (in-migrants) and subtracting the sum of all 1990 residents of other states who resided in that state in 1985 (out-migrants). This net migration measure indicates the overall impact of 1985–90 internal migration on the state's population. Its use in this study is consistent with previous research based on the 1980 census (Filer, 1992; Walker *et al.*, 1992).

The measure of immigration used in this analysis identifies all 1990 State residents who reported a residence abroad in 1985. While it would be preferable to employ a net immigration estimate (comparable to the net internal migration estimate), neither the US census nor any other US statistical agency collects reliable estimates of emigrants from the United States. This use of the census 'residence abroad' question is also consistent with previous research. However, it should be noted that this estimate does not necessarily overstate total net immigration to the United States, despite its omission of the emigration component. This is because migration from abroad, as reported in the census, substantially understates the illegal immigrant population.[5] Because our use of the census question as a crude proxy for net immigration both overstates legal immigration and understates illegal immigration, a conservative bias will be built into our assessment of the expected negative relationship between immigration and net internal migration (addressed in question 4, above).[6]

Finally, the reader should be aware that personal characteristics ascertained with the census pertain to the end of the 1985–90 migration period. Hence, the determination of poverty status is based on the reported 1989 income of census respondents, and, therefore, only *approximates* the poverty population that may have existed at any point over the 1985–90 period.

IMMIGRATION AND INTERNAL MIGRATION TO STATES

To help address the questions put forward, this analysis employs a typology, developed in an earlier study (Frey, 1994a), which classifies states on the basis of their dominant migration source of change (Table 1). States classed as 'high immigration states' are the six states with largest 1985–90 migration from abroad, where the

immigration component overwhelms net internal migration (California, New York, Texas, New Jersey, Illinois, Massachusetts). Each of these states tends to have large existing settlements of earlier immigrants from Latin America and Asia. The six states classified as 'high internal migration states' (Florida, Georgia, North Carolina, Virginia, Washington, Arizona) displayed the greatest net increases in internal migration exchanges with other States over the 1985–90 period. Moreover, in each case, these internal migration gains significantly exceeded those of the immigration component (this is the case for Florida, as well, despite its strong attraction for immigrants). These internal migration magnets are located, largely, in the South Atlantic and the Pacific and Mountain divisions. They are regions with growing economies and, in most cases, climatic and other amenities. Finally, a third class of states includes five 'high out-migration states' (Louisiana, Michigan, Ohio, Oklahoma, Iowa). These states displayed greatest out-migration in their exchanges with other states and were not recipients of large immigration from abroad.

One distinction between these groups is that the dominant immigration stream to the high immigration states largely comprises minorities of Latin American or Asian origin, while the migrant gains to the high internal migration states are made up mostly of native-born whites (and, in some cases, blacks). These processes will lead to wider disparities in racial composition between these two categories of states (Frey, 1995a). However, the present paper focuses on another distinction that exists across state categories. This involves the unique 'downward

Table 1. Classification of states by dominant immigration and interstate migration contributions to population change, 1985–90.

Rank	State	Contribution to 1985–90 Change (1000s)	
		Migration from abroad[a]	Net interstate migration[b]
High immigration states[c]			
1	California	1499	174
2	New York	614	−821
3	Texas	368	−331
4	New Jersey	211	−194
5	Illinois	203	−342
6	Massachusetts	156	−97
High internal migration states[d]			
1	Florida	390	1071
2	Georgia	92	303
3	North Carolina	66	281
4	Virginia	149	228
5	Washington	102	216
6	Arizona	80	216
High out-migration states[e]			
1	Louisiana	30	−251
2	Ohio	69	−141
3	Michigan	74	−133
4	Oklahoma	32	−128
5	Iowa	17	−94

Source: Compiled from 1990 Census files at the Population Studies Center, The University of Michigan. From Frey (1994).
[a] 1990 State residents who resided abroad in 1985.
[b] 1985–90 In-migrants from other States minus 1985–90 Out-migrants to other States.
[c] States with largest 1985–90 migration from abroad which exceeds net interstate migration.
[d] States with largest 1985–90 net interstate migration and exceeds migration from abroad.
[e] States with largest negative net interstate migration and not recipients of large migration from abroad.

Table 2. Immigration and internal migration components of change, 1985–90, for poverty populations of high immigration states, high internal migration states, and high out-migration states.

State	Rates of migration from abroad[a]		Rates of Internal migration[a]		Components of Poverty Population Change		
	Poverty	Non-poverty	Poverty	Non-poverty	Total migration	Migration from abroad	Internal migration
High immigration states							
California	14.1	4.3	−1.5	0.7	402,727	450,777	−48,050
New York	7.7	3.1	−4.6	−4.8	64,691	156,873	−92,182
Texas	4.6	1.9	−2.3	−2.1	62,443	122,970	−60,527
New Jersey	7.4	2.6	−10.4	−1.4	−15,355	37,815	−53,170
Illinois	4.1	1.6	−5.3	−2.7	−13,420	48,206	−61,626
Massachusetts	9.4	2.1	−0.3	−2.2	41,848	43,403	−1.555
High Internal Migration States							
Florida	7.0	2.7	5.6	9.6	180,002	100,224	79,778
Georgia	2.0	1.4	2.7	5.4	38,397	16,045	22,352
North Carolina	1.2	1.0	4.2	3.9	40,362	9,159	31,203
Virginia	3.3	2.5	2.2	3.5	29,968	18,030	11,938
Washington	5.6	1.8	6.0	4.7	52,872	25,559	27,313
Arizona	5.4	1.8	5.3	6.6	52,718	26,407	26,311
High Out-Migration States							
Louisiana	0.8	0.7	−3.2	−7.5	−21,060	6,560	−27,620
Ohio	1.4	0.6	0.3	−1.4	20,598	16,583	4,015
Michigan	1.8	0.7	0.2	−1.5	20,266	18,468	1,798
Oklahoma	1.6	1.0	−0.2	−5.4	6,019	7,076	−1,057
Iowa	2.0	0.5	0.8	−4.3	7,531	5,389	2,142

Source: 1990 Census Full Migration Sample Compiled at Population Studies Center, University of Michigan.
[a] Rates per 100, 1990 population.

selectivity' of internal migration away from high immigration states.

POVERTY OUT-MIGRATION FROM HIGH IMMIGRATION STATES

Findings can now be focused on the first two questions raised above. To what extent did the poverty population move out of high immigration states during the 1985–90 period? Are the rates of net out-migration higher for the poverty than the non-poverty populations of these states? The data shown in Table 2 indicate a fairly consistent pattern. That is, all six high immigration states showed declines in their poverty population as a result of net internal migration; and in four of the six (New York and Massachusetts excepted), the poverty population out-migration rates were greater than those for the non-poverty population. The latter observation is consistent with the unique 'downwardly selective' out-migration that appears to be occurring as a response to large waves of poverty immigrants in these states (see columns 1 and 2 of Table 2). In contrast, the poverty-status selectivity patterns for the high internal migration states and high out-migration states conform more closely to the more conventional 'circulation of elites' model of migration discussed earlier. That is, the net migration losses in all five high out-migration states are more accentuated for their non-poor than poor populations. Likewise, the net migration gains for four of the high internal migration states are larger for their non-poverty populations (the higher poverty gains for North Carolina and Washington reflect the fact that these are destinations for 'return' and 'spillover' poverty migrants from high immigration states).

Finally, the last three columns in Table 2 permit an assessment of how migration from

abroad and internal migration contribute to overall change in each state's poverty population. The upper panel makes clear that in five of the six high immigration states, internal migration served to substantially reduce poverty population gains. California gains approximately nine times as many poverty migrants from abroad as it loses via internal out-migration to other states. However, internal out-flows reduce New York's poverty gains through immigration by almost two-thirds, and Texas' poverty gains from abroad by almost one-half. Moreover, in New Jersey and Illinois poverty out-migration to other states exceeds their poverty gains from abroad. This demographic displacement pattern of poverty migrants from abroad displacing internal migrants to other states begs the question of what other selectivity patterns are accompanying this displacement?

ATTRIBUTES OF POVERTY OUT-MIGRANTS

In order to address the third question raised above, I focus on the race-ethnic and education attributes associated with the net internal out-migration of the poverty population from high immigration states. How do they differ from the attributes of poverty immigrants from abroad?

Race and Latino Status

The race and ethnic attributes of poverty net out-migration can be assessed from the data shown in Tables 3, 4A, and 4B. The presumption that poverty out-migration from high immigration states was only a 'white flight' phenomenon is countered by the rates shown for blacks, and, to a lesser extent, Latinos and Asians. While for whites a net out-migration of poor migrants is

Table 3. Rates of internal migration, 1985–90, by poverty status and race-ethnicity for high immigration states, high internal migration states, and high out-migration states.

State	Rates of internal migration[a]							
	Non-Latino whites[b]		Blacks		Latinos		Asians	
	Poverty	Non-poverty	Poverty	Non-poverty	Poverty	Non-poverty	Poverty	Non-poverty
High Immigration States								
California	−3.9	0.8	−1.8	1.2	−1.1	−0.2	4.5	2.4
New York	−4.2	−4.5	−5.0	−5.6	−4.8	−6.5	−3.2	−4.4
Texas	−5.0	−2.5	−0.2	0.7	−1.1	−2.0	−5.2	−4.9
New Jersey	−17.7	−2.1	−5.4	0.3	−4.9	−0.9	−5.7	7.1
Illinois	−5.3	−2.7	−5.6	−2.6	−3.4	−1.5	−9.8	−5.3
Massachusetts	−3.4	−2.6	1.8	0.3	6.9	1.9	8.8	1.2
High Internal Migration States								
Florida	6.6	10.4	2.2	4.8	8.5	8.9	3.6	8.4
Georgia	2.2	4.9	2.8	6.2	17.2	15.9	−7.9	7.8
North Carolina	4.3	4.2	3.7	2.0	12.6	7.7	9.5	2.9
Virginia	1.2	3.2	3.5	4.2	8.0	10.4	3.5	4.8
Washington	5.9	4.8	4.5	3.4	10.3	7.0	1.4	2.7
Arizona	5.9	7.5	7.1	9.4	3.9	2.1	5.6	0.5
High Out-Migration States								
Louisiana	−5.0	−7.6	−1.6	−5.8	−12.1	−13.0	−11.5	−23.5
Ohio	−0.1	−1.4	1.0	−0.8	7.2	−0.6	−3.3	−2.9
Michigan	−0.3	−1.5	0.6	−1.2	5.2	−0.3	−1.9	−2.7
Oklahoma	−0.3	−5.3	1.5	−4.9	−0.3	−5.4	−13.1	−17.5
Iowa	0.5	−4.2	6.3	−5.1	−5.1	0.2	−5.2	−10.8

Source: 1990 Census Full Migration Sample Compiled at Population Studies Center, University of Michigan.
[a] Rates per 100, 1990 population.
[b] Estimated as: whites plus 'other races' minus Hispanics.

Table 4A. Immigration and internal migration components of change, 1985–90, by race–ethnicity for poverty populations of high immigration states, high internal migration states, and high out-migration states.

State	Components of Poverty Population Change					
	Non-Latino whites			Blacks		
	Total migration	Migration from abroad	Internal migration	Total migration	Migration from abroad	Internal migration
High immigration states						
California	16,013	58,588	−42,575	284	6,836	−6,552
New York	−3,563	29,283	−32,846	−1,353	28,311	−29,664
Texas	−32,467	11,048	−43,515	3,419	4,285	−866
New Jersey	−31,735	5,903	−37,638	−4,884	4,034	−8,918
Illinois	−16,514	13,179	−29,693	−22,093	2,066	−24,159
Massachusetts	−250	9,883	−10,133	4,546	3,557	989
High internal migration states						
Florida	58,109	11,864	46,245	27,324	17,481	9,843
Georgia	11,073	3,328	7,745	15,904	3,548	12,356
North Carolina	19,637	2,476	17,161	13,955	1,782	12,173
Virginia	8,417	4,760	3,657	9,371	1,847	7,524
Washington	27,413	6,408	21,005	2,245	1,061	1,184
Arizona	21,856	3,846	18,010	2,321	626	1,695
High out-migration states						
Louisiana	−15,437	1,429	−16,866	−6,781	1,031	−7,812
Ohio	5,371	6,017	−646	4,258	1,092	3,166
Michigan	6,275	8,358	−2,083	3,772	1,485	2,287
Oklahoma	694	1,813	−1,119	1,525	586	939
Iowa	2,866	1,637	1,229	1,140	313	827

Source: 1990 census full migration sample compiled at Population Studies Center, University of Michigan.

shown from all six states, this is also true of blacks and Latinos from five states and Asians from four. Although Latinos and Asians overwhelm immigrant growth in these states, there is a smaller but consistent pattern of net internal out-migration for these groups (except in Massachusetts, and for Asians in California). Moreover, the internal migration pattern for each group from the high immigration states conforms generally to the 'downwardly selective' immigrant 'push' pattern discussed earlier. This contrasts with the 'circulation of elites' model which tends to characterize each group's internal migration patterns for high internal migration states and high out-migration states.

Emphasis on aggregate population shifts, rather than rates, shows that the poverty immigration substitution for internal out-migrants translates into a Latino and Asian substitution for non-Latino whites. In California, for example, Latinos and Asians make up the dominant share of poverty immigrants, while non-Latino whites constitute the majority of the internal out-migrants. Only in New York and Illinois is there a significant alteration of this pattern – where blacks contribute almost as much as whites to the internal out-migration of the poverty population. Hence, the poverty turnover in high immigration states can be characterized as a demographic displacement by 'new immigrant minorities' of whites and, to a lesser extent, blacks. It is also of interest to see that poverty net in-migration gains for high internal migration states are dominated by the latter two groups. Indeed, poverty blacks outnumber poverty whites in the internal migration gains for Georgia and Virginia over the 1985–90 period.

Education Attainment

Are poverty net out-migrants from high immigration states similar in educational attainment to the immigrants who are displacing them? The data in Tables 5 and 6 shed light on this question.

Table 4B. Immigration and internal migration components of change, 1985–90, by race-ethnicity for poverty populations of high immigration states, high internal migration states, and high out-migration states.

State	Components of poverty population change					
	Latinos			Asians		
	Total migration	Migration from abroad	Internal migration	Total migration	Migration from abroad	Internal migration
High immigration states						
California	261,439	276,479	−15,040	124,991	108,874	16,117
New York	38,356	65,160	−26,804	31,251	34,119	−2,868
Texas	77,381	91,186	−13,805	14,110	16,451	−2,341
New Jersey	14,449	20,130	−5,681	6,815	7,748	−933
Illinois	16,464	21,471	−5,007	8,723	11,490	−2,767
Massachusetts	26,140	20,557	5,583	11,412	9,406	2,006
High internal migration states						
Florida	87,819	64,766	23,053	6,750	6,113	637
Georgia	8,474	5,614	2,860	2,946	3,555	−609
North Carolina	3,395	2,138	1,257	3,375	2,763	612
Virginia	7,074	5,879	1,195	5,106	5,544	−438
Washington	12,627	7,925	4,702	10,587	10,165	422
Arizona	24,808	18,643	6,165	3,733	3,292	441
High out-migration states						
Louisiana	113	1,932	−1,819	1,045	2,168	−1,123
Ohio	4,963	3,055	1,908	6,006	6,419	−413
Michigan	4,385	2,527	1,858	5,834	6,038	−264
Oklahoma	1,517	1,575	−58	2,283	3,102	−819
owa	853	477	376	2,672	2,962	−290

Source: 1990 census full migration sample compiled at Population Studies Center, University of Michigan.

The net migration rates shown in Table 5 make plain that the poverty net out-migration from these States is not a proxy for migrant skill-level or educational attainment. That is, for each of four broad categories of educational attainment (less than high school, high school graduate, some college, college graduate), out-migration rates for these states' poverty populations are generally greater in magnitude than for their non-poverty populations. This may reflect more head-to-head competition with poor immigrants, of similar education levels, who were forced to take less permanent types of jobs. Moreover, the higher migration response above poverty populations (when controlled for education) is only characteristic of movement from high immigration states. In the other two categories of states, it is the non-poverty population which is more likely to migrate in (to high internal migration states) or out (from high out-migration states).

The aggregate migration data in Table 6 make plain that at least in California and Texas poverty immigrants are decidedly less well-educated than the internal out-migrants. In both of these states, the vast majority of the poverty adult immigrants (aged 25 and above) have not completed high school, whereas internal out-migrants are more evenly distributed between high school dropouts and high school graduates. In New York, New Jersey and Illinois the mismatch is not nearly as imbalanced because a larger share of those states' immigrants are at least high school graduates. Massachusetts' demographic displacement patterns are not like those of the other states, reflecting, perhaps, the draw of more educated immigrants to the state's many institutions of higher learning. In sum, this review of race and educational selectivity patterns shows a general displacement of poverty out-migrant whites by largely 'new immigrant' minorities with lower skill levels.

Table 5. Rates of internal migration, 1985–90, by poverty status and educational attainment[a] for high immigration states, high internal migration states, and high out-migration states.

State	Rates of internal migration[b]							
	Less than HS graduates		HS graduates		Some college		College graduates	
	Poverty	Non-poverty	Poverty	Non-poverty	Poverty	Non-poverty	Poverty	Non-poverty
High immigration states								
California	−1.3	−0.6	−4.0	−0.8	−3.8	−0.1	−0.2	3.3
New York	−3.3	−3.9	−4.4	−4.6	−6.3	−5.8	−5.1	−6.1
Texas	−1.7	−2.1	−3.1	−2.6	−3.9	−2.4	−1.4	−1.8
New Jersey	−4.2	−1.9	−6.9	−2.3	−9.9	−2.2	−8.9	1.0
Illinois	−3.7	−2.2	−3.8	−2.6	−4.9	−3.3	−2.2	−2.6
Massachusetts	−0.4	−1.9	−4.0	−2.8	−4.4	−3.4	−3.3	−2.2
High internal migration states								
Florida	4.2	7.9	7.1	10.5	8.3	10.3	9.7	11.1
Georgia	1.4	2.5	2.5	3.6	4.4	6.7	7.4	7.9
North Carolina	2.1	2.1	3.7	2.9	5.6	4.4	5.4	5.3
Virginia	0.5	1.4	1.2	1.5	0.2	2.8	3.1	5.5
Washington	4.6	2.7	4.7	3.5	7.4	4.8	7.1	6.8
Arizona	2.3	4.8	4.5	7.4	7.7	7.6	11.0	7.8
High out-migration states								
Louisiana	−1.5	−3.3	−3.6	−5.4	−6.6	−9.7	−6.1	−12.3
Ohio	0.2	−0.8	0.6	−0.7	0.0	−1.4	−0.9	−3.5
Michigan	0.2	−1.2	0.2	−0.9	0.6	−1.3	−3.7	−3.2
Oklahoma	0.7	−2.0	0.1	−3.5	−0.6	−5.2	−4.3	−10.1
Iowa	1.0	−0.6	1.5	−1.6	0.8	−4.1	−3.6	−11.7

Source: 1990 census for full migration sample compiled at Population Studies Center, University of Michigan.
[a] For persons aged 25 and over.
[b] Rates per 100, 1990 population.

IMMIGRATION AND POVERTY OUT-MIGRATION

Does a state's immigration level exert an independent impact on poverty out-migration? This question is addressed in a series of regression equations where the dependent variables are state net migration levels for the period 1985–90, specific to different demographic sub-groups (by poverty status, race and educational attainment). The independent variables comprise: the state's 1985–90 immigration level; a geographic regional classification (dummy variables for the Northeast region, the Midwest region, the South Atlantic division, the Mountain division and the Pacific division, where parts of the South, which are not included in the South Atlantic division, represent the omitted category); five variables reflecting the metropolitan area's economic structure (unemployment rate in 1985, per capita income in 1985, per cer change in manufacturing employment and pe cent change in service employment for 1985–9(and the state's AFDC level); per cent of state population that was non-Latino white and blac in 1985 (for use in the equations for whites an blacks); per cent of 'new immigrant minorities' i the State (per cent Latinos and Asians); and th log of the state's population size in 1985. All (the migration and population data were draw from the 1980 and 1990 US censuses. Th economic characteristics were drawn from th *State and Metropolitan Area Data Book* (199 compiled by the US Bureau of the Census.

Table 7 shows the regression equations for th net migration for poverty populations and no poverty populations of the 51 States (includir District of Columbia). Separate equations a shown for the total population, for the whi population, and for the black population, aged

Table 6. Immigration and internal migration components of change, 1985–90, by educational attainment[a] for poverty populations of high immigration states, high internal migration states, and high out-migration states.

State	Components of poverty population change								
	Less than HS graduates			HS graduates			College graduates		
	Total migration	Migration from abroad	Internal migration	Total migration	Migration from abroad	Internal migration	Total migration	Migration from abroad	Internal migration
High immigration states									
California	106,939	117,672	−10,733	16,685	30,673	−13,988	29,060	29,428	−368
New York	15,390	35,581	−20,191	6,103	19,907	−13,804	14,010	18,923	−4,913
Texas	16,163	30,833	−14,670	−3,442	6,329	−9,771	8,229	9,265	−1,036
New Jersey	1,793	8,383	−6,590	−1,633	4,427	−6,060	2,463	4,686	−2,223
Illinois	−2,155	9,479	−11,634	−1,784	4,821	−6,605	6,736	7,725	−989
Massachusetts	3,977	8,473	−496	590	3,670	−3,080	5,039	6,071	−1,032
High internal migration states									
Florida	44,374	25,831	18,543	28,457	11,719	16,738	13,612	8,051	5,561
Georgia	6,740	2,707	4,033	4,373	1,683	2,690	3,396	1,894	1,502
North Carolina	7,012	1,239	5,773	4,780	994	3,786	2,500	1,522	978
Virginia	4,162	3,214	948	2,430	1,605	825	3,797	3,175	622
Washington	8,916	4,842	4,074	5,344	1,943	3,401	3,987	2,298	1,689
Arizona	8,844	6,093	2,751	4,344	1,466	2,878	4,202	2,093	2,109
High out-migration states									
Louisiana	−3,514	704	−4,218	−3,692	624	−4,316	−29	1,023	−1,052
Ohio	2,396	1,863	533	2,589	1,427	1,162	3,304	3,591	−287
Michigan	2,700	2,165	535	1,868	1,548	320	2,908	3,989	−1,081
Oklahoma	1,638	784	854	621	530	91	724	1,346	−622
Iowa	1,047	457	590	1,156	328	828	842	1,218	−376

Source: 1990 census full migration sample compiled at Population Studies Center, University of Michigan.
[a] For persons aged 25 and over.

Table 7. Net internal migration, 1985–90, by poverty status regressed on state attributes for total population, whites and blacks[a] (standardized regression coefficients).

State attributes[b]	Total		Whites		Blacks	
	Poverty	Non-Poverty	Poverty	Non-poverty	Poverty	Non-poverty
Region[c]						
Northeast	−0.27	−0.10	−0.12	−0.13	−0.62[d]	−0.50[d]
Midwest	−0.11	−0.02	−0.06	−0.11	−0.38[d]	0.23
South Atlantic	0.18	0.29[d]	0.17	0.32[d]	0.16	0.35[d]
Mountain	0.10	0.12	0.12	0.01	−0.18	0.09
Pacific	0.13	0.24	0.17	0.11	−0.16	0.09
Unemployment	−0.16	−0.21	−0.10	−0.15	−0.31[d]	−0.34[d]
MFG growth	0.14	0.16	0.19	0.22	0.12	−0.04
Service growth	0.39[d]	0.40[d]	0.40[d]	0.42[d]	0.23[d]	0.18
Income	−0.29[d]	−0.00	−0.35[d]	0.07	−0.20	0.21
AFDC	0.23	−0.18	0.19	−0.22	0.35	−0.21
% whites	—	—	−0.04	0.25	—	—
% blacks	—	—	—	—	−0.22	−0.49
% Latinos and Asians	−0.23[d]	−0.13	−0.22	0.11	−0.13	−0.16
Immigration	−0.47[d]	0.07	−0.52[d]	0.09	−0.45[d]	−0.09
Pop. size (log)	0.17	0.02	0.18	0.01	0.20	0.12
R^2	0.62	0.52	0.67	0.55	0.53	0.55

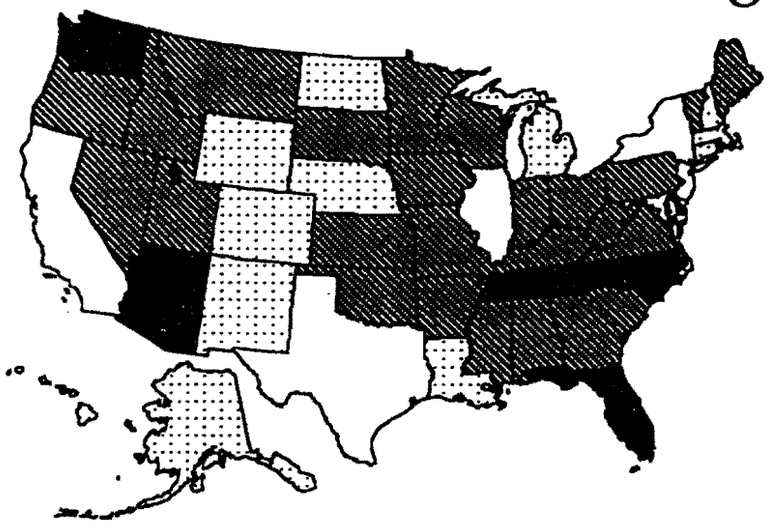
[a] Persons aged 5 and above in 1990.
[b] See text for attribute definitions.
[c] Omitted category includes the remainder of the South region (other than South Atlantic).
[d] Significant at 0.1 level.

Table 8. Net internal migration, 1985–90, by poverty status regressed on state attributes for educational attainment groups[b] (standardized regression coefficients).

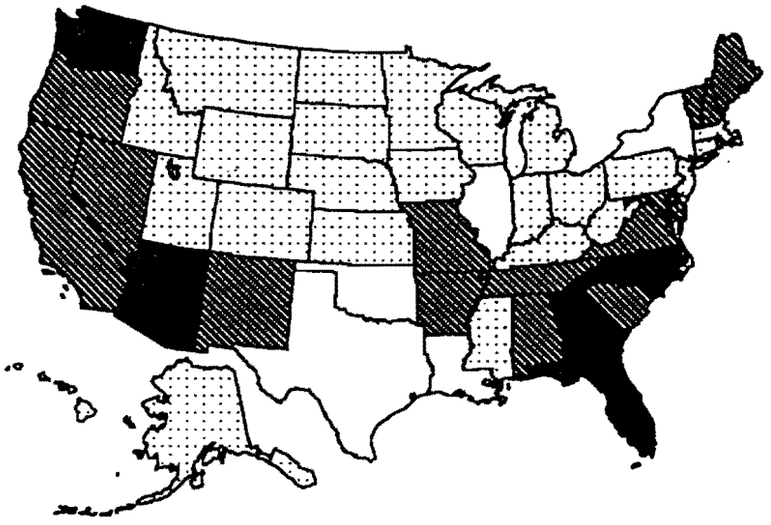
State attributes[b]	Less than HS		HS graduate		College graduate	
	Poverty	Non-poverty	Poverty	Non-poverty	Poverty	Non-poverty
Region[c]						
Northeast	−0.23	−0.09	−0.03	−0.05	−0.04	−0.15
Midwest	−0.12	−0.03	0.02	0.01	0.14	−0.04
South Atlantic	0.17	0.26	0.23	0.27	0.27[d]	0.24
Mountain	0.03	0.08	0.12	0.10	0.24	0.12
Pacific	0.07	0.11	0.16	0.13	0.52[d]	0.35
Unemployment	−0.10	−0.16	−0.07	−0.14	−0.14	−0.24
MCF growth	0.15	0.21	0.17	0.21	0.05	0.04
Service growth	0.35[d]	0.34[d]	0.35[d]	0.38[d]	0.39[d]	0.35[d]
Income	−0.22	−0.04	−0.19	−0.02	−0.10	0.06
AFDC	0.20	−0.13	0.03	−0.16	−0.36[d]	−0.24
% Latinos and Asians	−0.18	−0.07	−0.13	−0.07	−0.12	−0.16
Immigration	−0.48[d]	−0.15	−0.59[d]	−0.10	−0.14	+0.38[d]
Pop. size (log)	0.12	0.04	0.20	0.06	0.07	−0.11
R^2	0.54	0.43	0.61	0.43	0.56	0.57

[a] Persons aged 5 and above in 1990.
[b] See text for attribute definitions.
[c] Omitted category includes the remainder of the South region (other than South Atlantic).
[d] Significant at 0.1 level.

Poverty Whites - Net Interstate Migration



Non-Poverty Whites - Net Interstate Migration



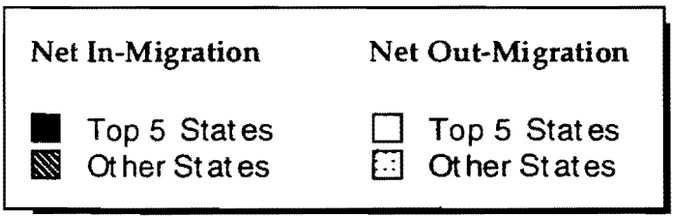


Figure 1.

and above in 1990. A similar set of equations is shown in Table 8 for persons aged 25 and above, classed by their levels of educational attainment. The results are consistent with expectations in showing that immigration exerts a significant negative effect on net poverty migration for each demographic subgroup except for college graduates.[7] Moreover, the immigration effect is not significant in explaining net migration for the non-poverty populations of each group except college graduates, where the effect is positive (reflecting, perhaps, the dual labor-market character of some high immigration areas discussed in Sassen (1991) and Mollenkopf and Castells (1991)). The only other consistent finding across all of the equations except one (non-poverty blacks) is the positive effect that service growth exerts on net migration gains for poverty and non-poverty populations alike. Clearly, the growth of service employment constitutes the dominant general effect on net interstate migration for this period. The regional categories, in the race-specific comparisons, show a consistent positive effect for the South Atlantic division on non-poverty migration. This result suggests that there are unmeasured economic and amenity 'pulls' for non-poverty migrants to this region, in contrast to the immigration 'pushes' that appear to be exerted on the poverty population. These distinct effects are consistent with the patterns shown in Figure 1. The upper map, depicting the net migration patterns of poverty whites, shows sharp levels of out-migration from selected high immigration states, but a more diffuse pattern of destinations for poverty net in-migration. In contrast, non-poverty white migration responds more sharply to 'pulls' of distinct destination states, primarily in the South Atlantic and Mountain regions. While a more detailed migration flow analysis is required, these maps, in conjunction with the regression results, suggest that poverty and non-poverty populations participate in somewhat different migration stream networks.

A few other regression coefficients in the Tables are worthy of note. Poverty migrants among the total, and white populations, respond negatively to a state's average income level – reflecting, perhaps, its relative cost of living. Poverty and non-poverty black migrants respond negatively to unemployment in the Northeast and (for black poverty migrants only) the Midwest regions. State AFDC benefit levels do not exert significant impacts on poverty or non-poverty migration for most comparisons (poverty AFDC benefits show an unanticipated negative relationship with the net migration of poverty college graduates).

CONCLUSION

The purpose of this article is to present new empirical results from the 1990 census that point up unique patterns of poverty net out-migration from high immigration states. While earlier analyses of 1990 census statistics have shown a general tendency for high immigration states to lose internal migrants (Frey, 1994, 1995a), the findings presented here show that this tendency is amplified for the poverty populations of these states. States experiencing high immigration showed similar or greater net out-migration rates for their resident poverty populations than for their more well-off population segments. This stands in contrast to the conventional 'circulation of elites' model of interstate migration which holds that the most able, well-off and talented segments of the population are most apt to respond to migratory 'pushes' and 'pulls'. Our findings are consistent with the views of scholars who suggest that recent immigration to the US is imposing economic and social costs which are disproportionately borne by the less well-off residents of States which receive the greatest immigrant inflows (Briggs, 1992; Borjas, 1995).

While our results are consistent with this view, they are based on cross-sectional state-level analyses which do not permit inferences about the proximate economic and social impacts that immigration appears to exert on poverty out-migration. Additional research, both qualitative and quantitative, directed towards examining these determinants will be especially useful for informing ongoing debates and evaluations of US immigration policy. For example, it would be useful to know how much of the current poverty out-migration is driven by labor market competition with new immigrants of different skill levels. This would permit a better assessment of the overall 'costs' of immigration that goes beyond examining the unemployment rates and wage-level changes among only the (non out-migrating)

native-born residents in high immigration states. It is also important to understand how sensitive poverty out-migration is to either the magnitude of immigrant additions to the area's population, or to the demographic attributes (i.e., race-ethnicity, skill level) of these immigrants. This is relevant to ongoing evaluations of the US immigrant preference system, related to considerations such as family reunification versus skill preferences, and the national origins of immigrants (Martin, 1993).

The findings presented here also suggest changes for the social geography of the US poverty population. It is clear that a 'demographic displacement' of the poverty population is occurring within high immigration states, where the out-migrating poverty population is largely white and, on the whole, better educated than the Latino and Asian dominated poverty immigrants to these states. The continuation of these patterns will lead to distinctly different demographic profiles for the poverty populations in high immigration states, as compared with their counterparts in the rest of the country. This would suggest that government training and other programs designed to reduce poverty levels will need to be specially tailored for particular geographic regions. Moreover, within high immigration states, these trends suggest a sharper polarization of the population that couples race and ethnicity with class – a pattern that can only increase the social distance between the poor and the rest of the population.

Forecasting a continuation of these trends, of course, presupposes that high levels of US immigration will continue to be focused on a few port-of-entry states, at the same time that poor longer-term residents of these states continue to filter to other parts of the country. This scenario assumes both that current immigration policies will not be altered and that linkages between immigration and internal migration of the poor will persist. However, while neither assumption can be proffered, the results of this analysis are strong and consistent enough to warrant additional investigations as to the nature of these linkages. They hold important implications for the social geography of the US poverty population and for the unique race and class structures that appear to be emerging within high immigration states. Beyond this, such studies should provide a greater understanding of how South to North international migration can alter internal population redistribution within developed countries, indirectly, by affecting established internal migration patterns of long-term residents.

NOTES

(1) My use of the term 'demographic displacement' is to describe the situation where a state gains population through immigration, and concurrently loses population through internal migration. I elaborate on this by comparing the sizes and characteristics of immigrants with those of internal out-migrants over the period. However, in using this term, I do not necessarily ascribe a causal relationship between the two. Later in the text I do discuss possible explanations such as labor force displacement (which presumes that the out-migrants have been displaced by immigrants in employment opportunities) or the preference for long-term residents to relocate away from an increasing racially and ethnically diverse population.

(2) I use the term 'poverty' population rather than the generic term 'poor' because the former is based on federal statistical guidelines that are used for a variety of government policies. Persons in families and unrelated individuals are classified as being above or below poverty, using a poverty index that is based on the Department of Agriculture's Economy Food Plan that reflects the different consumption requirements of families based on their size and composition. Poverty thresholds are updated annually to reflect changes in the Consumer Price Index. Poverty thresholds for 1989 (used in this study) were $12,675 for a family of four (sliding scale depending on family size), and $6311 for an individual not living in a family (US Bureau of the Census (1992) *Statistical Abstract of the United States: 1992*, Washington, DC, pp. 426–7).

(3) The issue of whether states with high welfare benefits constitute 'magnets' for in-migration poverty population from other States is a matter of continuing policy debate (Peterson and Rom, 1990; Moffitt, 1992). A recent analysis of US census data suggests that the 'welfare magnet' effect on poverty migration is fairly minimal (Frey *et al.*, 1995c).

(4) The perception that immigrants constitute a substantial public burden is illustrated by the fact that Proposition 187 (the so-called 'save our State' initiative) was passed in a California state-wide referendum in November, 1994. Aimed primarily at illegal immigrants, this initiative asserts that 'no person – citizen, legal immigrant or illegal immigrant – shall receive any public social services to which he or

she may otherwise be entitled until the legal status of that person has been verified (Martin, 1995)'. Under Proposition 187, illegal immigrants would be denied access to the State's public education systems from kindergarten through university, and would require all service providers to report suspected illegal immigrants to California's attorney general. This proposition was voted favorably upon by 64 per cent of whites, 57 per cent of Asians, 56 per cent of Blacks, and 31 per cent of Latinos. While the enactment of this initiative was delayed, pending a review by the courts, its strong support is indicative of California residents' attitudes towards the costs of immigration to that State.

(5) It is estimated that, during a given year, there is an emigration of between 150,000 and 200,000 residents. However, it is also estimated that there is a net annual immigration of 300,000 illegal immigrants, many of whom are not counted by the census (Martin and Midgley, 1994). Thus, the figures we use will tend to overstate legal immigration but understate illegal immigration for the 1985–90 period.

(6) It is argued that the hypothesized negative relationship between immigration and internal migration exists because of the labor force competition and social costs that are presumed to be associated with the relatively less-skilled segments of the immigrant population. Fix and Passel (1994) have estimated that illegal immigrants constitute a disproportionate share of these lesser-skilled immigrants, and, therefore, to the extent our data underestimate these immigrants (see Note 5), our estimated negative relationships between immigration and internal migration will serve to understate the actual relationship.

(7) A reviewer of this paper suggests that the existence of a negative relationship between these two variables may indicate that immigration should be considered the dependent variable and net internal migration the independent variable. This reasoning follows from the arguments that social polarization is occurring within 'global cities' as discussed earlier in the text, and that immigration to such cities is a result of the demands of the advanced service sector. In fact, an alternative specification of the first equation in Table 7 – where immigration serves as the dependent variable and net internal migration of the poverty population serves as one of the independent variables – also yields a strong (−0.41) negative relationship between these two variables. However, as we note in the earlier text, it is inappropriate to treat immigration as a dependent variable since the volume and destinations of legal immigrants are sharply constrained by existing US immigration policy. Furthermore, one cannot assume that the concurrent internal net out-migration of the poverty population is responding to industrial downsizing and, therefore, independent of the effects of immigration. Industrial downsizing within most high immigration areas occurred well before the 1985–90 period observed here (Frey, 1990).

REFERENCES

Borjas, G.J. (1994) The economics of immigration, *Journal of Economic Literature* 32:1667–717

Borjas, G.J. and Freeman, R. (1992) *Immigration and the Work Force* (Chicago: University of Chicago Press)

Briggs, V., Jr. (1992) *Mass Immigration and the National Labor Market* (Armonk, New York: M. E. Sharpe)

Champion, A.G. (1994) International migration and demographic change in the developed world, *Urban Studies* 31:653–77

Filer, R.K. (1992) The effect of immigrant arrivals on migratory patterns of native workers, in G. J. Borjas and R. B. Freeman (eds.) *Immigration and the Work Force* (University of Chicago Press, Chicago) 245–70

Fix, M. and Passel, J. (1994) *Immigration and Immigrants' Setting the Record Straight* (Washington, DC: The Urban Institute)

Frey, W.H. (1979) Central city white flight: racial and nonracial causes, *American Sociological Review* 44:425–48

Frey, W.H. (1990) Metropolitan America: beyond the transition, *Population Bulletin* (Washington, DC: Population Reference Bureau)

Frey, W.H. (1994) The new white flight, *American Demographics* (April), 40–8

Frey, W.H. (1995a) The new geography of US population shifts: trends towards balkanization, in Reynolds Farley (ed.) *The State of the Union: Social Trends*, (New York: Russell Sage) 271–336

Frey, W.H. (1995b) Immigration and internal migration 'flight': a California case study, *Population and Environment* 16:353–75

Frey, W.H., Liaw, K.L., Xie, Y. and Carlson, M. (1995c) Interstate migration of the US poverty population: immigration 'pushes' and welfare magnet 'pulls', *Research Report No. 95-331* (Ann Arbor: University of Michigan Population Studies Center)

Hamnett, C. (1994) Social polarization in global cities: theory and evidence, *Urban Studies* 31:401–24

Johnson, J.H. and Roseman, C.C. (1990) Increasing black out-migration from Los Angeles: the role of household dynamics and kinship systems, *Annals of the Association of American Geographers* 80:205–22

Lansing, J.B. and Mueller, E. (1964) *The Geographic Mobility of Labor* (Ann Arbor, MI: Institute for Social Research)

Long, L. (1988) *Migration and Residential Mobility in the United States* (New York: Russell Sage)

Martin, S.F. (1993) The commission on immigration reform, *Migration World* 21:43–44

Martin, P. (1995) Proposition 187 in California, *International Migration Review* 29:255–63

Martin, P. and Midgley, E. (1994) Immigration to the United States: journey to an uncertain destination, *Population Bulletin* 49(2)

Miller, J.J. (1994) *Strangers at Our Gate: Immigration in the 1990s* (Washington, DC: The Manhattan Institute)

Mofitt, R. (1992) Incentive effects of the US welfare system, *Journal of Economic Literature* 30:1–61

Mollenkopf, J.H. and Castells, M. (eds.) (1991) *Dual City: Restructuring New York* (New York: Russell Sage)

Peterson, P.E. and Rom, M.C. (1990) *Welfare Magnets: A New Case for a National Standard*, (Washing The Brookings Institution)

Sassen, S. (1991) *The Global City: New York, Tokyo* (Princeton: Princeton University Pres

Simon, J. (1989) *The Economic Consequences of tion* (New York: Basil Blackwell)

Walker, R., Ellis, M. and Barff, R. (1992) Linked systems: immigration and internal labor flo United States, *Economic Geography* 68:234–4

White, M.J. and Imai, Y. (1993) The in immigration upon internal migration, *and Environment* 15, 189–209